## ABSTRACT FOR THE EGS 2001, Nice, 25-30 March 2001

- 1. PS6.01 Outer planets: Observations of the Jovian system by Galileo and Cassini/Huygens
- 2. First Submission
- 3. OVERVIEW OF THE FLYBY OF JUPITER BY CASSINI/HUYGENS
- 4. Authors: MATSON, D.; LEBRETON, J-P
- 5. 02 The Cassini/Huygens mission to Saturn and Titan
- 6. Convener: Johnson, T.V.; Co-Convener(s): Lebreton, J.-P., Matson, D.L.
- 7. Matson (Pasadena, CA)
- 8. Standard.
- 9. NONE
- 10. ORAL
- 11. WORD97, ATTACHED
- 12. Matson

Dennis L Cassini Project Scientist JPL 4800 Oak Grove Drive Pasadena, CA 91109 USA 818 354-2253 FAX 818 393-4495

dmatson@jpl.nasa.gov

## OVERVIEW OF THE FLYBY OF JUPITER BY CASSINI/HUYGENS

- D. L. Matson (1), J.-P. Lebreton (2)
- (1) Jet Propulsion Laboratory, California Institute of Technology,(2) Space Science Dept. of of ESA, ESTEC

The Cassini/Huygens spacecraft is flying to Saturn in order to carry out an in-depth exploration of Titan and the Saturnian system. En route it has already flown by Venus (twice), the Earth, and Jupiter. The closest approach to Jupiter was on December 30, 2000. The weeks surrounding closest approach were a busy time for Cassini. Data were being collected to study: •Jupiter's atmospheric composition and dynamics, including the aurora, and heat flow, • Jupiter's rings, • Europa and Callisto with observations exactly at opposition, •Himalia's rotation period, •Io in eclipse, •the interaction of Jupiter's magnetosphere with the solar wind, •Io's dust stream, and •Jupiter's synchrotron radiation. Collaborative studies are also being carried out jointly with the Galileo spacecraft which has been orbiting Jupiter for the last five years. Instruments in Earth-orbit and on the ground are also involved in the collaborative observing efforts.

This talk will present an overview of the *Cassini/Huygens* flyby of Jupiter and provide context and perspective for the status reports which are being presented at this meeting, some ninety-days after the flyby.

The Cassini mission is a joint undertaking by NASA and ESA, with ASI as a partner via a bilateral agreement with NASA. The JPL portion of this work has been carried out under contract with NASA.